Claims

1 - A tire comprising at least one carcass reinforcement formed of at least one ply formed of reinforcing elements and anchored in each bead B to at least one circumferential reinforcing element (such as a bead core), each bead B being reinforced by at least two reinforcement plies formed of reinforcing elements inclined relative to the circumferential direction at an angle between 10° and 30° and crossed from one ply to the next, said reinforcement plies being axially adjacent to the carcass reinforcement, **wherein** the reinforcing elements of at least one carcass reinforcement ply, in each part adjacent to the two bead reinforcement plies, are inclined relative to the circumferential direction at an angle between 50° and 80°, the same reinforcing elements being radial in the part located between the radially upper ends of said reinforcement plies, said ends being located radially outside the sidewall points that define the maximum axial width of the tire when fitted to its intended wheel rim and inflated.

2 - The tire according to Claim 1 wherein in at least one bead, the carcass reinforcement ply passes between the additional bead reinforcement plies.

3 - The tire according to Claim 1 wherein the reinforcing elements of the carcass ply and of the reinforcement plies are made of textile material.

4 - The tire according to Claim 3 wherein it comprises a crown reinforcement composed of several reinforcement plies whose reinforcing elements are textile cables.

5 - The tire according to Claim 1 wherein the reinforcement plies are formed of reinforcing elements crossed over from one ply to the next at angles whose absolute values are unequal.

6 - A process for the fabrication of a tire according to Claim 1 and comprising the following stages:

- a rubber layer forming the internal layer is positioned, followed as necessary by the positioning of reinforcements, sections, etc.

- a reinforcement ply comprising reinforcements that make an angle smaller than 30° with the circumferential direction is positioned,

- a carcass ply of radial cables (angle equal or close to 90°) is positioned, taking care to ensure good contact and strong adhesion in the uncured state between the carcass ply and the reinforcement ply,

- an intermediate layer is positioned over the carcass ply followed by the positioning of a reinforcement ply over said intermediate layer, the effect of said intermediate layer being to prevent contact and adhesion between the carcass ply and the reinforcement ply,

- a bead wire and the necessary rubber sections are positioned between the ply and the turn-up of the carcass ply,

- the carcass ply is turned up around the bead wire,

- the cylindrical carcass blank is finished by shaping,

- the intermediate layer is removed and the shaping of the unvulcanized tire is completed,

- the tire is vulcanized.

7 - The process for the fabrication of a tire according to Claim 2 wherein during the making up of a cylindrical carcass reinforcement blank on a drum, the carcass ply and a radially adjacent reinforcement ply are firmly attached to one another by adhesion in the uncured state, whereas the reinforcement ply positioned above the carcass ply is detached from the carcass ply.